

EXPERIENCE

- **Google** San Francisco Bay Area, CA
Software Engineer *Jul. 2018 – Present*
- **Vevo** San Francisco, CA
Senior Machine Learning Engineer *Jan. 2017 – Jul. 2018*
Software Engineer *Dec. 2015 - Jan. 2017*

One of the first engineers on Vevo's data team. Collect and analyze data from the platform and train models that power personalization of music video applications.

- **Recommender Systems:** Responsible for developing, training, and deploying machine learning models to recommend items to users.
- **Latent Factor Modeling:** Model the latent factors of entities using large, noisy, and sparse datasets in a semantic embedding space.
- **Transfer Learning:** Train models using latent factors and past behavior to predict user preference.
- **ML Infrastructure:** Design, implement, test, and deploy data collection, model training, and recommendation delivery pipelines.

- **Yola** San Francisco, CA
Team Lead, Frontend Engineering *Apr. 2015 – Dec. 2015*
Web Application Engineer *Jul. 2013 – Apr. 2015*

Led a team of six frontend engineers in developing and maintaining a website builder. The team's responsibilities range from planning application architecture to test driven implementation.

- **Created Large Build Pipelines:** Developed and optimized build pipelines for code deployed to millions of user owned websites, as well as the website builder and related properties.
- **Single Page Applications:** Developed single page applications through which customers design their websites.
- **Created an End to End Testing Pipeline:** Developed an end to end integration testing and validation process that is run on commits to feature branches, staging releases, and production releases.

- **Forge Aerospace** Boulder, CO
Software Engineer *Jan. 2013 – Jul. 2013*

Developed a proof of concept for Forge's data storage strategy. The company's product collected data from small UAVs and sent it to a remote storage backend. Designed a schema to store, index, and query time-series data. Wrote a REST style API ontop of the database that allowed UAVs and human users to read and write data.

EDUCATION

- **University of Southern California** Los Angeles, CA
Master of Science in Computer Science (Data Science) *Jun. 2017 – Present*

Coursework emphasizes theoretical understanding of machine learning and probabilistic reasoning, as well as computational implications of these methods.

- **University of Colorado** Boulder, CO
Bachelor of Science in Computer Science *Jan. 2010 – Jul. 2013*

Curriculum emphasized systems, linear algebra, discrete mathematics, algorithms, and software engineering.

Bachelor of Arts in Economics *Aug. 2006 – Dec. 2010*

Studies included micro and macro economics, econometrics, linear regression, optimization, and game theory.

PROJECTS

- **Slugnet:** Author of a modest, experimental neural networks library that exposes a high level API similar to that of Keras.
- **HiDi:** HiDi is a library for high-dimensional latent factor modeling for collaborative filtering applications.
- **Wincast:** Wrote an NFL win forecast system. Uses a model trained on historical NFL play data to predict game outcomes given a scenario.
- **Django REST Framework:** Contributed security fixes and features to the framework's client throttling component
- **Q Promises Library:** Contributed performance improvements and feature enhancements to the Q promises library.

TECHNICAL COMPETENCIES

- **Machine Learning Methodologies:** Discriminative models, generative models, graphical models, deep learning
- **Software Engineering Methodologies:** Test Driven Development, GitFlow
- **Languages:** Python, Scala, Javascript
- **Technologies:** Numpy, Pandas, Keras, TensorFlow, Docker, Jenkins, GoCD, Git, AWS, Kubernetes, Django, Flask, React, Akka, Spray, SQL, MySQL, Aurora, LaTeX

REFERENCES

Upon request only.